



Size Matters: Table of Contents

Overview of Unit

Teacher Materials	O-T1
For Anyone Planning to Teach Nanoscience...Read This First!	O-T2
Size Matters Overview and Learning Goals	O-T7
Unit at a Glance: Suggested Sequencing of Activities	O-T11
Alignment Chart: Enduring Understandings.....	O-T13
Alignment Chart: Key Knowledge and Skills.....	O-T14
Size Matters Pretest/Posttest: Teacher Answer Sheet	O-T15
Student Materials.....	O-S1
Size Matters: Pretest	O-S2
Size Matters: Posttest.....	O-S4

Lesson 1: Introduction to Nanoscience

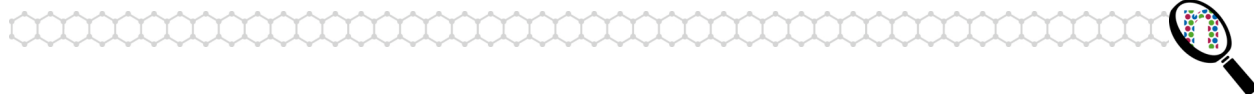
Teacher Materials	1-T1
Introduction to Nanoscience: Teacher Lesson Plan	1-T2
Introduction to Nanoscience: PowerPoint with Teacher Notes	1-T5
Introduction to Nanoscience Worksheet: Teacher Key	1-T19
Student Materials.....	1-S1
Introduction to Nanoscience: Student Reading.....	1-S2
Introduction to Nanoscience: Student Worksheet	1-S12
Scale Diagram: Dominant Objects, Tools, Models, and Forces at Different Scales.....	1-S13
The Personal Touch: Student Reading.....	1-S14
The Personal Touch: Student Worksheet.....	1-S20

Lesson 2: Scale of Objects

Teacher Materials	2-T1
Scale of Objects: Teacher Lesson Plan.....	2-T2
Number Line/Card Sort Activity: Teacher Instructions & Key	2-T4
Cutting it Down Activity: Teacher Instructions & Key.....	2-T6
Scale of Objects Activity: Teacher Key.....	2-T8
Scale of Small Objects Quiz: Teacher Key.....	2-T9
Student Materials.....	2-S1
Visualizing the Nanoscale: Student Reading	2-S2
Scale Diagram: Dominant Objects, Tools, Models, and Forces at Different Scales.....	2-S9
Number Line/Card Sort Activity: Student Instructions & Worksheet.....	2-S10
Cards for Number Line/Card Sort Activity: Objects & Units.....	2-S12
Cutting it Down Activity: Student Instructions & Worksheet	2-S16
Scale of Objects Activity: Student Instructions & Worksheet.....	2-S17
Scale of Small Objects: Student Quiz.....	2-S18

Lesson 3: Unique Properties at the Nanoscale

Teacher Materials	3-T1
Unique Properties at the Nanoscale: Teacher Lesson Plan.....	3-T2



Unique Properties at the Nanoscale: PowerPoint with Teacher Notes.....	3-T4
Unique Properties Lab Activities: Teacher Instructions.....	3-T17
Unique Properties at the Nanoscale: Teacher Reading.....	3-T34
Unique Properties at the Nanoscale Quiz: Teacher Key.....	3-T42
Student Materials.....	3-S1
Size-Dependent Properties: Student Reading	3-S2
Unique Properties Lab Activities: Student Instructions	3-S10
Unique Properties Lab Activities: Student Worksheet.....	3-S20
Unique Properties at the Nanoscale: Student Quiz.....	3-S28

Lesson 4: Tools of the Nanosciences

Teacher Materials.....	4-T1
Tools of the Nanosciences: Teacher Lesson Plan	4-T2
Scanning Probe Microscopy: Teacher Reading	4-T4
Scanning Probe Microscopy: PowerPoint with Teacher Notes	4-T11
Black Box Activity: Teacher Instructions & Key	4-T19
Seeing and Building Small Things Quiz: Teacher Key.....	4-T21
Optional Extensions for Exploring Nanoscale Modeling Tools: Teacher Notes.....	4-T22
Student Materials.....	4-S1
Black Box Lab Activity: Student Instructions & Worksheet.....	4-S2
Seeing and Building Small Things: Student Reading.....	4-S4
Seeing and Building Small Things: Student Quiz.....	4-S10

Lesson 5: Applications of Nanoscience

Teacher Materials.....	5-T1
Applications of Nanoscience: Teacher Lesson Plan.....	5-T2
Applications of Nanoscience: PowerPoint with Teacher Notes.....	5-T4
What's New Nanocat? Poster Session: Teacher Instructions & Rubric	5-T20
Student Materials.....	5-S1
What's New Nanocat? Poster Session: Student Instructions	5-S2
What's New Nanocat? Poster Session: Student Topic List	5-S3
What's New Nanocat? Poster Session: Peer Feedback Form	5-S10

One Day Introduction to Nanoscience

Teacher Materials.....	6-T1
One Day Introduction to Nanoscience: Teacher Lesson Plan.....	6-T2
One Day Introduction to Nanoscience: Teacher Demonstration Instructions	6-T5
One Day Introduction to Nanoscience: PowerPoint with Teacher Notes.....	6-T9